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ABSTRACT

Discussions between Portugal and Sweden regarding cooperation in the field of education have been going on since 1975. This report outlines short term and long range goals, conditions, and proposals of the Swedish mission to Portugal to implement modern information and documentation services in scientific and technical research and development. Preliminary plans call for Portugal's use of the Swedish EPOS-VIRA system developed at the Library of the Royal Institute of Technology in Stockholm for current awareness services, and the RECON system managed by the European Space Agency for retrospective services. The first phase of the project would be carried out within the framework of the Instituto de Alta Cultura (IAC) and Direccao Geral do Ensino Superior (DGES), both under the secretary of state for higher education and research. Activities proposed for this phase include (1) reorganization of one of IAC's centers into a center for scientific and technical documentation to serve as the central coordinating and documentation center within the ministry of education; (2) an experimental SDI service to test the need for and acceptance of such a service; (3) training of Portuguese information officers in the use of Sweden's EPOS-VIRA and RECON systems; and (4) compilation of a union list of serials on microfiche. Timetables, budget proposals, and terms of reference for the mission are appended. (JPF)

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REPORT TRITA-LIB-1072

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U.S. DEPARTMENT OF HEALTH,
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SWEDISH-PORTUGUESE COOPERATION IN THE FIELD OF
SCIENTIFIC AND TECHNICAL INFORMATION AND DOCUMENTATION

Project identification mission to Portugal
2 - 14 February 1976

"PERMISSION TO REPRODUCE THIS
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Stephan Schwarz

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TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC) AND
USERS OF THE ERIC SYSTEM."

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1. CONTEXT AND TASKS OF THE MISSION

Early in 1975 discussions were started regarding a possible cooperation between Portugal and Sweden in the field of education. In these discussions there was expressed by Portugal a desire for cooperation in the field of information and documentation services. As a first step in exploring and defining these cooperation activities a visit was made by two Portuguese experts, Dr Carlos Pulido and Mr Amílcar Sernadas, to Sweden 23 - 29 November 1975. In their report from the mission (preliminary plans for a programme were proposed. A status report on Scientific and Technical Information and Documentation in Portugal was prepared in Lisboa in January 1976 as an aid for planning the mission that is reported in this document.

The terms of reference for the mission have been stated in a separate paper, see App. 1, so in this context the goals preliminarily agreed upon for the proposed cooperation activities will be only briefly reviewed as a background.

The general goal of the cooperation is to introduce modern methods for information services to research and development. In the discussion held prior to this Swedish mission to Portugal it had been agreed that this general goal should be approached through a pilot project, the aim of which would be to provide modern information services in Portugal using the Swedish EPOS-VIRA system developed at the Library of the Royal Institute of Technology in Stockholm for current awareness, and the RECON system managed by the European Space Agency for retrospective services. The task for the mission was thus to investigate and establish the

premisses and prerequisites in Portugal for this project.

2. PROGRAM FOR THE MISSION AND PEOPLE CONTACTED

The mission to Portugal was carried out by R Hjerppe and S Schwarz from KTHB during February 2nd - February 14th and February 11th - February 14th respectively. The programme for the mission, which had not been fixed in advance, was drawn up during the stay in co-operation with the two Portuguese experts Dr C. Pulido and Mr A. Sernadas, who throughout the mission were the main contacts and whose help and assistance was invaluable to the mission. The programme for the mission can be divided into three parts, visits, discussions and a summing up.

During the mission visits were made to the following institutions and the following persons were met

IAC - Instituto de Alta Cultura, Vice President Dr D Monra

CDC - Centro de Documentação Científica, Head Mrs Maria de Fatima Branco

CCUL - Centro de Calculo das Universidades de Lisboa, Head Mr Hector Pina and Mr Mendes dos Santos

National Library - Head of Documentation Dept.

Ministry of Education - Direcção-Geral do Ensino Superior, Prof L Fraser Monteiro

Meeting with representatives of the Portuguese universities.

The working sessions or discussions which were the other main part of the mission were held together with Dr Pulido and Mr Sernadas and most of the results of the mission, as presented in this report, are based on these enlightening and fruitful discussions.

At the end of the mission a statement of proposal for a number of concrete cooperation activities was prepared as a summing up of the mission. This paper is appended to the report as Appendix 2.

3. MODERN INFORMATION SERVICES

In the context of this report there will be no attempt at indicating the existence of nor at demonstrating the need for modern, computer based information services for research and development. This has been done with much better eloquence in other circumstances, e.g. the UNISIST and NATIS programmes of UNESCO. Suffice it here to state that access to information is of critical importance to all research and development activities.

Although the information needs and uses of people involved in research and development are diverse and have been described within many different sets of categories it will for the purposes of this discourse be expedient to discuss three aspects of information services.

A basic distinction can first be made between the need for current awareness services which keep the scientist or researcher aware of the current situation in his areas of research and interest, and retrospective services which give him the possibility of finding out what has been done earlier. The current awareness need is customarily catered for through contacts with colleagues and through the scanning of professional journals. The retrospective need is similarly customarily satisfied by searching private or institutional collections or by utilizing the resources of the libraries.

These traditional methods are today no longer sufficient since the volume of research, and correspondingly the volume of information, has in its prolonged exponential growth reached such proportions that it is manageable only through the utilization of computers.

Computerized current awareness services are usually designated by "SDI-services" (SDI being an acronym of Selective Dissemination of Information). The main features of SDI are that each subscriber to the services regularly (usually on a weekly basis) receives a list of new references to literature that has been published within his special research field or area of interest during the intervall (week) since the preceding list. The main components of the system producing these lists are

- 1) One or several computer-readable bibliographic files (which usually have a corresponding printed version, an abstract or index or reference journal, usually called secondary publications)
- 2) Formalized descriptions of the information needs (profiles) to be compared with the contents of the bibliographic files
- 3) Computer hardware and
- 4) Computer software for the information processing (comparison) of the files and profiles.

As an auxiliary there is often an intermediary, an information officer or documentalist, between the users of the system and the system. This intermediary must have an understanding of information retrieval system and know its rules, have a good knowledge of the bibliographic file, its structure and contents, and be able to understand the expressed, verbalized information needs, i.e. have a scientific education at university level.

The main components of retrospective systems are in principle the same. The difference resides mainly in the fact that SDI-systems usually only process the addition, update, to the file whereas retrospective systems process the cumulated file for every query. SDI-systems usually perform their computer processing in batch-mode while retrospective systems today mostly are interactive (on-line) and accessible through telecommunication networks.

The second distinction to be made is the difference in providing someone who has requested information with a reference or with a document or with the requested information. The situation today, with respect to computerized information and documentation services, is that they will, upon a request for information, only provide references, pointers, to documents that might contain relevant information.

There can thus be no successful computerbased information service (reference provision) without a good back-up service, providing access to, or usually copies of, the documents referred to. Good library services are thus a fundamental prerequisite for modern information services, the more so since the computerbased service usually have a vaster coverage than the traditional services, thus bringing into notice, and demand, a much greater and more varied number of documents that might be of interest to the individual researcher or scientist. This is even more marked for applied and multidisciplinary research. A modern information service will thus highlight the weaknesses and strain the virtues of the library systems responsible for the document delivery. Critical in this function are 1) the ability to locate the requested document and 2) the ability to provide

access to the document, (usually in the form of a copy of a journal article which is the dominating type of document in science and technology).

The third aspect of importance for information services is the organizational and administrative context, its structure and components. The contexts of research and of information service (including the relation to the library system) and the relations between these have critical influence on the fate of information services, and in the long run on research. Included in this aspect are also the economics of information services.

4. STATUS IN PORTUGAL

In the preliminary discussions held prior to the mission it was agreed that in the first phase the planned co-operation would for the part of Portugal be within the framework of the Ministry of Education and Scientific Research. The status described here pertains thus to the situation within this framework. The brief description, which is the result of an analysis of the material collected and compiled by the Portuguese experts and of the short mission does not pretend to give a comprehensive and detailed picture but rather a broad outline.

Most of the scientific and technical research in Portugal is done within the framework of IAC - Instituto de Alta Cultura, which is under the secretary of state for higher education and research belonging to the ministry of education which encompasses all levels of education. This ministry has under it two main bodies, IAC which is responsible for all research and only for

research and DGES, Direcção-Geral do Ensino Superior which is responsible for higher education. There is thus in purely formal terms very little research done at the universities but in practice most of the research centres of IAC are located at the university campuses. Industrial and academic (IAC) research are quite separated and it seems unusual for researchers at universities or IAC centers to do research commissioned by industries.

One IAC center of special importance is the CDC - Centro de Documentação Científica. The CDC is producing a union list, for the periodical holdings of approximately 400 libraries including 50 000 titles. This union list which is maintained with traditional, manual methods is in the process of being transferred to a computerized system.

The CDC also performs some information services based on the portuguese inter-library loan system and foreign services. The status of the total library system, as seen in the material provided by the Portuguese is that the libraries are usually small with few people employed, most of them being clerical staff, and with small holdings. As seen through the union list the holdings are very heterogenous, scattered and often with great overlap (which of course often is unavoidable). Due to their organizational status all state financed libraries are prohibited from receiving payment for services rendered, which in principle means that photocopying services cannot be offered as a charged service, although in practice many libraries have photocopying equipment.

The education of librarians and documentalists is very traditional and aimed primarily at humanistic libraries.

The existing information services are small, specialized and local and use traditional methods. Outside the Ministry of Education there is under the prime minister's office an assembly or Information and Documentation Cabinet with an advisory and policy formulating role. Affiliated to the prime minister's office there is also a "pool" or working group for cooperation among various libraries and documentation centers, including industrial.

5. PROPOSALS

The goals and boundary conditions for the proposals later on can be summarised as follows:

PORTUGAL

SWEDEN

Short term goals

Initiate modem information services for research and development

Assist in planning, preparation and initiation

Boundary conditions

In the first phase the project will be managed and operated within the ministry of education

In the first phase the Swedish assistance will come from the IDC-KTHB through SIDA

In the first phase an experimental information service will be offered mainly but not exclusively to researchers within IAC and the universities

The data bases of IDC cover mainly science and technology

Long range goals

Operate, maintain and develop information services in Portugal for science and technology as well as behavioral and social sciences and arts and humanities without limitations on user affiliation

Cooperation in developing operating and using information services

PROPOSAL 1

A temporary working group with representatives from IAC and DGES (Pulido and Sernadas) is appointed for performing the work in other proposals until proposal 2 is implemented.

PROPOSAL 2

The CDC is reorganized into CDCT, a center for scientific and technical documentation with the following roles.

The CDCT should:

- Be the central and coordinating information and documentation center within the ministry of education
- Be a "center of excellence" and "primary resource center" for scientific documentation
- Be the international focal point in information and documentation
- Be a "change agent" for the library system of Portugal
- Promote awareness of information and research as a resource
- Promote the development of modern information services
- Promote the utilization of information services
- Maintain inventories of research projects and researchers
- Maintain inventories of scientific publications in Portugal
- Coordinate the utilization of library resources
- Produce bibliographic files on literature of special interest to Portugal e.g. wine, cork etc.

In terms of concrete functions the immediate and intermediate goals for the CDCT would be the following:

- Produce a union list of serials, in the first phase for the libraries within the ministry of education and when that is routine approach other ministries, industries and others for a truly national union list of periodicals. In parallel union catalogs for monographs and reports should be investigated in cooperation with libraries. The union list of serials is of fundamental importance for locating the journals requested as a result of information services. As a byproduct a computer-based union list could be used for consolidating the library holdings so that odd items in one library which are missing in an otherwise complete series of another library, could be transferred to the second library.
- Operate information services. In the first phase primarily for users within the ministry of education, later on for everyone. The information service would be offered by having the CDCT provide information officers at CDCT and by educating others in organizations outside as a step in a decentralization of user contact. In the first phase the services at IDC-KTHB would be utilized for processing. The CDCT could in the future be responsible for the acquisition and processing of bibliographic files. The back-up service should usually be the responsibility of libraries but in difficult cases the CDCT should assist in locating and accessing the documents. The services offered should encompass SDI-services, retrospective searches using available systems nationally and internationally, and manual searches in the cases where computerbased methods are not sufficient. The CDCT should also perform referral or switching to other centers in the cases where it can give no assistance by itself.
- Promote, initiate and advice libraries on automation, cooperation and networks
- Pursue research in information science
- Perform evaluations of information and library services

Some critical factors within the CDCT:

- The competence of the director and staff
- The ambitions of the director and staff
- The career possibilities for staff

- The growth possibilities for CDCT
- The financing of new activities

Some critical factors in the interaction of CDCT with its environment:

- The probable resistance to change from the library system
- The perceived value of the services
- Relations to existing documentation centers which will see the CDCT as a competition
- The growth of international information networks

PROPOSAL 3

An experimental SDI-service based on the services and resources of IDC-KTHB is offered by CDCT during one year to test the need for and acceptance of such a service. Similarly retrospective services are made available by contacting ESA (European Space Agency) for access to their RECON-system with the same purpose.

These information services will be provided by various components performing different functions. In tables 1 and 2, pages 13 and 14, are listed some of the components and functions of a system providing computer-based information services.

The prerequisites for the realization and possible success of proposal 3 are formulated as further proposals. The economic bases of these proposals can be found in Appendix 3 which contains a budget proposal.

The components A, B, C, I and functions 1 - 5 will be the responsibility of IDC-KTHB during the first phase.

The costs of this are indicated in Appendix 3 point 4. The price charged is the average real cost per subscription. In Sweden the service is subsidized so that during fiscal year 1976-77 the price will be 600 Sw Crs for academic, university affiliated users and 800 Sw Crs for others. Since the experimental information service will be provided by CDC(T), an IAC institution, for mainly other IAC institutions the question of pricing in Portugal is not of immediate interest. Even so it is felt that some kind of subscription fee, even if only nominal, should be affixed to the service after the first experimental phase since the real need for and value of the service will otherwise be difficult to ascertain. The question of subsidy or cost coverage (marginal or average) arises when the information service is utilized to a noticeable extent by people outside IAC.

Component D which is the responsibility of the Portuguese authorities has already been discussed under proposals 1 and 2.

Component E is a joint responsibility since IDC-KTHB will be responsible for educating parts of the personnel and since Portugal is responsible for selecting and using the personnel.

TABLE 1 : COMPONENTS OF AN INFORMATION SERVICE

- A Bibliographic files
- B Computer facilities
- C Computer software
- D Formal organizational status of information service
- E Personnel with adequate education and training
- F Working facilities (offices, equipment etc.)
- G Customers (users)
- H Promotional material
- I Output lists
- J Document ordering facilities (copy orders)
- K Original documents - libraries
- L Original document access facilities (union list)
- M Reproduction facilities
- N Finances
- O Accounting, administration facilities
- P Cost, income, distribution, invoicing facilities for services and document access
- Q Feedback facilities
- R Evaluation facilities

TABLE 2 : ACTIVITIES OF AN INFORMATION SERVICE

- 1 Contact with producers of files (negociations, changes,...)
- 2 Handling of files (registration, marking, storing,...)
- 3 Processing of files (reformat, search, compress, regenerate)

(TABLE 2 CONT'D)

- 4 Contact with information processing center (contract, changes,...)
- 5 Programming (modifications, development,...)
- 6 Promotion of services
- 7 Definition of information need for users
- 8 Translation of information need to search language (profiling)
- 9 Follow-up of results
- 10 Distribution of output (checking, addressing, enveloping,...)
- 11 Invoicing
- 12 Maintain user register
- 13 Provision of back-up service
- 14 Administration
- 15 Accounting, budgeting
- 16 Evaluating
- 17 Reporting, contact with superior organization
- 18 Education, internal and external
- 19 Referral, switching
- 20 Research and development
- 21 International contacts, participation in conferences etc.
- 22 Participation in working groups, committees etc. on national level

PROPOSAL 4

Two information officers are educated 2 months at IDC-KTHB in information science and trained in the handling and utilization of the SDI-system EPOS-VIRA and the retrospective search system ESA-RECON. One systems engineer (software specialist) studies at IDC-KTHB the possibilities of converting the EPOS-VIRA system for implementation in Portugal. Two information officers which have received basic education and training from the preceding information officers are given further education at IDC-KTHB. One systems engineer who will be responsible for the operation of EPOS-VIRA in Portugal is educated one month in Stockholm. The financial details and schedules for these educational activities, which have been partly realized, are found in Appendix 3 under point 1 and parts of point 5.

The charges and percentages indicated in the proposed budget, which will be charged by KTHB, from the budget of the SIDA assistance programme, are according to the rules for commissioned project work within universities.

The need for information officers is quite obvious. Whether the CDCT should have systems personnel and programmers of their own is i.a. dependent on the relations to the computing center used and the assistance they can provide. From many points of view, competence, control, responsibility and continuity, to name a few, it is desirable for the CDCT to have a systems staff of their own if they are operating a service by themselves.

Besides the staff mentioned there is also a need for clerical staff for all office activities and routines.

PROPOSAL 5

A one-week course for librarians and a seminar for research managers is arranged in Portugal.

Since the introduction of information services will have a great impact on the libraries it is most important to arrange a reorientation course for librarians giving them an understanding in scientific research and communication, cooperation and networks. The aims of this course would be to prepare them for the increased demand on services from libraries that will be one result of the information services.

The objectives of the seminar for research managers is to show them the possibilities of computer based methods. The economic details of the course activity are listed under points 2 and 5. Within the assistance project would fall the responsibility for the participating arrangers and lecturers from Sweden and the lodging costs of those attending the course while travel and salary would be the responsibility of the Portuguese authorities.

PROPOSAL 6

The CDCT and IDC-KTHB are equipped with similar teletype-compatible terminals with cassettes.

In order to facilitate the communication from Portugal to Sweden of profiles (formalized, computer readable descriptions of information need) the two centers are equipped with similar terminals so that CDCT can with the aid of their terminal enter all profile information onto a cassette which is then mailed to Stockholm. This cassette is then used in the Stockholm terminal for

transmitting the profile information to the computer. The Portuguese terminal can also be used for performing retrospective searches on the ESA-RECON system. After the first, experimental period the Swedish terminal can be delivered to Portugal, depending on the results of the first phase.

PROPOSAL 7

The provision of components F-H, J-Q are the responsibility of the CDCT unless otherwise specified in these proposals. (Since the details of these components are too voluminous for inclusion into this kind of report, and since they have been an essential topic in the discussions held during the Portuguese visits already realized to Stockholm, they will be discussed only partly in the rest of the report.)

PROPOSAL 8

The union list of serials, which is in the process of being transformed to a computerized file, should be limited in a first phase to covering 1) only scientific and technical journals (the holdings of 100 libraries defined as scientific/technical) 2) complete holdings or holdings since 1970. In the second phase, when the list from the first phase is ready, the list should be extended to the holdings for all 400 libraries, complete or since 1970. In the third phase the earlier holdings for all libraries would be added to the computer readable file.

The aims of this proposal are to speed up the production of the union list so that it can be ready during the experimental phase. The first phase limitations arise from the fact that the files to be utilized in the

information services are mostly in the areas of science and technology and the fact that they do not usually extend much further backwards than 1970.

PROPOSAL 9

Key-to-diskette equipment is installed at the CDC.

In order to speed up the transformation of the union list to computer readable form key-to-diskette units which enable faster input and easier verification than traditional punching. The costs for this are indicated under point 6.3 in Appendix 3 and would be changed on the assistance budget.

PROPOSAL 10

The union list of serials is produced on microfiche.

Producing the union list on microfiche as an alternative to the traditional printed list results in easier, cheaper production and gives possibilities for more frequent updated versions. According to the preliminary discussions the microfiches would be produced in Sweden from the magnetic tapes prepared by CDC. The costs for the production are negligible and can be included under point 7 in Appendix 3.

PROPOSAL 11

CDC is provided with microfiche equipment as indicated under point 6.5 in Appendix 3.

PROPOSAL 12

The CDCT is equipped with manuals in English for the EPOS-VIRA system. Since the manuals available at

IDC-KTHB today are mostly in Swedish they will be translated into English for the purposes of the co-operation and for future educational activities in Portugal. CDCT will be provided with 5 copies of each manual.

PROPOSAL 13

CDCT is equipped with a basic collection of books and journals in library and information science.

Access to the literature on library and information science is very important for the information officers of CDCT. This basic collection will also serve as the core of a reference collection. A preliminary list of books and journals has been compiled during the visit of the first information officers to Sweden. The practical details of acquisition must be solved in discussion with the concerned parties. The financial details are indicated in point 6.4 of Appendix 3.

PROPOSAL 14

The staff of CDCT should be given opportunity to regularly visit the most important conferences and to participate in international cooperative work. Only through regular contacts with the colleagues in other countries and in Portugal can a good information service be assured in the longer perspective since library and information services are becoming more and more international with the developments in telecommunication and information networks and systems. This is clearly a Portuguese responsibility.

PROPOSAL 15

Arrangements are made between CDCT and the major

suppliers of difficult documents, e.g. BLLD, British Library Lending Division in England, CNRS-CD Centre National de Recherche Scientifique - Centre de Documentation in France and NTIS, National Technical Informatin Service in U.S.A. for access to documents which can not be found in Portugal.

Even though the goals are that the documents requested should be available in Portugal this is not always feasible. In that case the CDCT could have the responsibility of locating and accessing the document.

PROPOSAL 16

This proposed cooperative effort is evaluated and the evaluation is most essential and also very complex and needs thus to be planned and discussed in detail. It is thus suggested that a seminar on evaluation be held in Portugal at the middle of the experimental period, and a final evaluation at the end. The costs for this are indicated under points 3 and 5 in Appendix 3.

6. TIMETABLE

The preliminary timetable for the cooperative efforts is as follows:

February	2 - 14	Swedish mission (R Hjerpe, S Schwarz) to Portugal
March 15 - May 15		Two Portuguese information officers (A Sernadas, G da Silva) trained at IDC-KTHB
April 19 - May 7		Portuguese system engineer (M dos Santos) studies EPOS-VIRA at IDC-KTHB

May 10 - 15	Discussion with Portuguese project coordinator (C Pulido) at IDC-KTHB
May 20 - 21	Joint visit (R Hjerppe, C Pulido, A Sernadas) to RECON User Seminar in Frascati
May 24 - August	Preparation, installation of equipment etc. in Portugal
Sept 1976 - Dec 1977	Experimental information service in Portugal
February 1977 (2 weeks)	Two portuguese information officers educated at IDC-KTHB
April 1977 (1 week)	Course and seminar in Portugal
April 1977 (1 week)	Seminar on evaluation in Portugal
November 1977 (1 week)	Evaluation of experimental phase
February 1978	Final report from evaluation and experimental phase

7. SUMMING UP

This report should not be regarded as a final and authoritative statement but rather as a contribution to a continuing discussion. Many details, proposals, practical aspects and agreements that have not been included here have been considered during the mission to Portugal with Dr Pulido and Mr Sernadas, and later, during their stay in Stockholm, with Mr Sernadas and Mrs da Silva. Among the things that have been discussed but not included in this report is the marketing of information services and the importance and difficulties of marketing and user education.

The second phase, the implementation of EPOS-VIRA in Portugal and the operation of own information services has not been discussed but should be brought up if and when the first phase indicates that there is sufficient demand.

ACKNOWLEDGEMENTS

Dr Carlos Pulido and Amílcar Sernadas are thanked for their invaluable assistance and Dr G Moura and L Fraser Monteiro for their support during the mission.

Dr S Schwarz, head of the RIT Library, is thanked for initiatives, participation and encouragement.

Mission to Portugal with regard to the planned cooperation between Portugal and Sweden in the field of scientific and technical information and documentation

Discussions between Portugal and Sweden regarding a possible cooperation in the field of education have been going on since early in 1975. In this context Portugal has expressed a desire for cooperation with regard to information and documentation services. The Library of the Royal Institute of Technology (RIT) in Stockholm is prepared to assist in the planning and implementation of this programme. In order to assess and specify in detail the requirements of the Swedish-Portuguese cooperation in the field of scientific and technical information and documentation a project identification mission should be sent to Portugal. The mission will visit Portugal from to and will be composed of one or two experts in the field of information and documentation. The mission shall be responsible to SIDA and to the Portuguese authorities concerned.

The terms of reference for the mission are as follows:

1. The mission should compile background information on the information and documentation systems in Portugal.
2. The mission should specify in detail the requirements of the cooperation between Portugal and Sweden in the field of scientific and technical information and documentation. This part of the work should be based on the discussions already held between Portugal and Sweden, the results of which are outlined in the attached aide-memoire "Co-operation in the field of information and documentation in science and technology" and in Mr Sernadas' and Mr Pulido's report of 5 December, 1975 referring to their visit to Stockholm in November 1975.
3. In those cases where Swedish experts are recommended for work in Portugal, the mission should work out tentative job descriptions for these experts.
4. In those cases where study visits to Sweden by Portuguese documentalists are recommended, the mission should work out tentative study plans.
5. The mission should investigate the requirements for making available to Portuguese users, on a limited scale, the Selective Dissemination of Information (SDI) services of the RIT Library.

6. The mission should work out tentative plans for a training programme for Portuguese information officers. Such a training programme has to be based on the existing personnel situation and on the ambitions of the development of Portuguese Scientific and Technical Information Systems and Services (STI/SS).
7. The mission should prepare a time-schedule for the implementation of those activities where Swedish-Portuguese cooperation will be recommended.
8. The mission should work out a tentative cost-estimate for the Swedish-Portuguese cooperation programme in this field.
9. In order to speed up the implementation of the recommended cooperation programme, the mission should start to work in some of the possible areas of cooperation already during its stay in Portugal.
10. In its report the mission should include information on Swedish resources available for the cooperation between Portugal and Sweden in this field.
11. The mission should present a written report in English not later than three weeks after its return to Sweden. The report should be delivered to SIDA and the Portuguese authorities concerned.

COOPERATION BETWEEN SWEDEN AND PORTUGAL
IN THE FIELD OF INFORMATION AND DOCUMENTATION
IN SCIENCE AND TECHNOLOGY

Fact finding mission to Portugal

February 2nd to February 14th

Discussions were held between Swedish and Portuguese delegates with the purpose of studying the fulfilment of the programme previously established by the two Governments in the field of information and documentation in science and technology.

Swedish delegation:

Mr. S. Schwarz and Mr. R. Hjerpe from the Library of the Royal Institute of Technology, Stockholm.

Portuguese delegation:

Mr. D. Moura and Mr. C. Pulido from the Instituto de Alta Cultura;
Mr. L. Fraser Monteiro and Mr. A. Sernadas from the Direcção-Geral do Ensino Superior.

The actions accomplished till today imply that steps 1-3 of the Development Programme, settled last November in Stockholm, are almost entirely matched. Only the "Definition of the Documentation Centre" is not yet entirely finished, but the outlines of this step have already been discussed and it is hoped that it will be accomplished in a short period.

To proceed along this line of cooperation SIDA's support for the following points is proposed:

- 1 - To send two Portuguese documentalists to the Documentation Service of the Library of the Royal Institute of Technology to be trained in the use of modern methods of information storage and retrieval - from 14th March to 16th May.
- 2 - To send one Portuguese systems engineer to the same Service, during six weeks in two periods - the first period from 19th April to 16th May.
- 3 - To send one Portuguese from the direction of the new documentation centre to the same Service in order to evaluate and discuss immediate aims to be reached concerning the organization of this Portuguese documentation centre - from 26th April to 2nd May.
- 4 - To send two other Portuguese information officers to the same Service to improve and up-date their training - two weeks in the beginning of 1977.
- 5 - To send a team of two Swedish experts to Portugal for the evaluation of the programme development - one week in April 1977.
- 6 - To send a team of two Swedish experts to Portugal for lecturing an intensive course of about 20 students in a resort place outside Lisbon - one week in April 1977.

- 7 - To support the stay of about 20 students in a resort place outside Lisbon for course in documentation mentioned in point 6 - one week in April 1977.
- 8 - To contribute for the rental of the equipment needed for the union catalogue of periodicals work - three key-to-diskette units during three months.
- 9 - To contribute to the payment of the processing of the profiles of a maximum of 100 Portuguese users of the SDJ, during the experimental stage - one year.
- 10 - To support the translation into English of the Swedish information manuals.
- 11 - To contribute for the payment of a basic collection of literature in information science for equipment of the library of the new Portuguese documentation centre.
- 12 - To contribute for the acquisition of following equipment for Portuguese scientific and technical libraries:
 - 5 micro-fiche readers;
 - 1 micro-fiche reader/printer
 - 1 micro-fiche duplicator.

Lisbon, 13th February 1976

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Budget proposal for the Swedish-Portuguese cooperation in information
and documentation for the period March 1st 1976 - December 31st 1977

1 Education in Sweden of Portuguese 68 461

1.1 Education of 2 information officers 15.3 - 15.5 1976

2 man month	F15	11 916
+ 119 %		<u>14 180</u>
		26 096

1.2 Education of 1 systems engineer 19.4 - 7.5 1976

1/2 man month	F15	2 979
+ 119 %		<u>3 545</u>
		6 524

1.3 Education of 2 information officers 2 weeks in Febr 1977

1/2 man month	F15	3 098
+ 122 %		<u>3 780</u>
		6 878

1.4 Education of systems personnel, 1 month spring 1977

1 man month	F15	6 196
+ 122 %		<u>7 560</u>
		13 756

1.5 Planning and administration of educational programs

1 man month	F18	6 850
+ 122 %		<u>8 357</u>
		15 207

2 Course activities in Portugal 20 998

2.1 Planning and preparation for course in April 1977

1 man month	F15	6 196
+ 122 %		<u>7 560</u>
		13 756

2.2	Course activities			
	1/4 man month	F15	1 549	
	1/4 man month	F18	<u>1 713</u>	
			3 262	
	+ 122 %			3 262
				<u>3 980</u>
				7 242
3	Evaluation and reporting			23 724
3.1	Planning and evaluation			
	1/2 man month	F18	3 562	
	+ 122 %		<u>4 346</u>	
			7 908	
3.2	Visits to Portugal, in April, November 1977			
	1/2 man month	F18	3 562	
	+ 122 %		<u>4 346</u>	
			7 908	
3.3	Final report preparation			
	1/2 man month	F18	3 562	
	+ 122 %		<u>4 346</u>	
			7 908	
4	Information service			150 000
4.1	Fee for 100 subscriptions to SDI-service of IDC-KTHB			
	100 X 1 500		150 000	
5	Travel and subsistence costs			83 441
5.1	Costs incurred under point 1, visits to Sweden			
	6 trips Lisboa-Stockholm-Lisboa		13 500	
	Hotel costs in Stockholm. est. 210 nights			
	at 103		21 630	
	Per diem 210 at 70		<u>14 700</u>	
			49 830	

5.2	Cost for visit by Portuguese project coordinator My 9th - May 16th 1976		
	1 trip Lisboa-Stockholm-Rome-Lisboa	2 500	
	Hotel cost 7 nights at 103	721	
	Per diem 7 at 70	490	
		<u>3 711</u>	
5.3	Visits to Portugal under point 2 and 3		
	4 trips Stockholm-Lisboa-Stockholm	8 900	
	Per diem 30 at 100	3 000	
	Hotel costs 30 nights at 100	3 000	
		<u>14 900</u>	
5.4	Lodging costs for course under point 2 20 students 5 days at 150	15 000	
6	Equipment and materials		175 000
6.1	Material for course under point 2	5 000	
6.2	Manuals for SDI-system of IDC-KTHB Translation into English	25 000	
	Typing and preparation	5 000	
		<u>30 000</u>	
6.3	Rental of Key-to-Diskette Equipment 1 unit 9 months	20 000	
6.4	Basic collection of literature in information science 150 books 50 journals	45 000	
6.5	Microfilm equipment 5 simple readers 1 reader-printer 1 duplicator	10 000 15 000 10 000	
		<u>35 000</u>	

6.6 Computer terminals

2 teletype-compatible terminals
with cassettes

40 000

7 Unforeseen expenses and costs

60 000

Total 1 - 7 581 624